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10/829,572	04/22/2004	Daniel R. Wright	MTC 6875.1 (39-21(52751)B	6729
321	7590	10/05/2009	EXAMINER	
SENNIGER POWERS LLP 100 NORTH BROADWAY 17TH FLOOR ST LOUIS, MO 63102			BROWN, COURTNEY A	
			ART UNIT	PAPER NUMBER
			1616	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspatents@senniger.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/829,572	<b>Applicant(s)</b> WRIGHT ET AL.	
	<b>Examiner</b> COURTNEY BROWN	<b>Art Unit</b> 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 29-53, 59 and 62 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 29-53, 59, and 62 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Acknowledgement of Receipt/Status of Claims*

This Office Action is in response to the amendment filed June 10, 2009. Claims **29-53, 59** and **62** are pending in the application. Claims 1-28,54-58,60 and 61 have been cancelled. Claims 29, 33, 37-39,42,46,49,50 and 62 have been amended. Claims **29-53, 59** and **62** are being examined for patentability.

In the Office Actions mailed June 23, 2008 and March 12, 2009, the examiner inadvertently rejected claims 29-53, and 59 on the ground of nonstatutory obviousness-type double patenting over claims 1-4,7-10,12-24,26-38,48,63,69-73, and 75-84 of copending Application No. 11/368,873 versus copending Application No. 11/368,872 as helpfully pointed out by Applicant. This inadvertent typographical error has been corrected in this Office Action.

Rejections not reiterated from the previous Office Action are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set of rejections and/or objections presently being applied to the instant application.

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### *Withdrawn Rejections*

The rejection of claims 59, 33, 37-39 and 42 under 35 U.S.C. 112, second paragraph has been withdrawn.

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The rejection of claims 49 and 50 under 35 U.S.C. 112, second paragraph has been **withdrawn**.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

The provisional rejection of claims 29-53, and 59 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4,7-10,12-24,26-38,48,63,69-73, and 75-84 of copending Application No. 11/368,872 **is maintained**. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instantly claimed subject matter embraces or is embraced by the co-pending application 11/368,872.

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Instant claims 29-53 and 59 and copending claims 1-4,7-10,12-24,26-38,48,63,69-73, and 75-84 recite the same composition comprising glyphosate or a derivative thereof, a pyridine analog or a derivative thereof (i.e. bipyridilium), and at least one surfactant. From this extensive overlap of subject matter, one of ordinary skill in the art would recognize that the same product is taught in the copending application 11/368,872.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The provisional rejection of claims 29-53, and 59 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1,9,10,11,15,16, and 17 of copending Application No. 11/227,577. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instantly claimed subject matter embraces or is embraced by the co-pending application 11/227,577 **is maintained**.

Instant claims 20-53 and copending claims 1,9,10,11,15,16, and 17 recite the same herbicidal composition comprising glyphosate or a salt thereof (claims 1 and 9), a surfactant (claim 15) and a pyridine derivative (claims 16 and 17, imazapyr and triclopyr). However, the copending application discloses the use of a fatty acid component (i.e. pelargonic acid). Pelargonic acid, also known as nonanoic acid is commonly used as a herbicide. It would have been obvious to one of ordinary skill in the art to include an additional herbicidal component in order to increase the total effectiveness of the herbicidal composition. From this extensive overlap of subject

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matter, one of ordinary skill in the art would recognize that the same product is produced in the copending application 11/227,577 .

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The provisional rejection of claims 29-53, and 59 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 11, 13, 15, and 16 of copending Application No. 11/438,573 **is maintained**. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instantly claimed subject matter embraces or is embraced by the co-pending application 11/438,573 .

Instant claims 29-53 and 59 and copending claim 1 recites the same herbicidal composition comprising glyphosate or a salt thereof (claim), a surfactant (claim 11) and a pyridine derivative (claims 13,16, and 16). The only difference between the instant application and that of copending Application No. 11/438,573 is the different concentrations and ratios of components used in the herbicidal compositions. It is routine optimization for one of ordinary skill in the art to adjust the amount of ingredients to optimize the desired results. From this extensive overlap of subject matter, one of ordinary skill in the art would recognize that the same product is produced in the copending application 11/438,573 .

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Examiner's Response to Applicant's Remarks***

Applicant's request to hold in abeyance the nonstatutory obviousness-type double patenting provisional rejection of claims 29-53, and 59 over claims 1-4,7-10,12-24,26-38,48,63,69-73, and 75-84 of copending Application No. 11/368,872; claims 1,9,10,11,15,16, and 17 of copending Application No. 11/227,577; and claims 1, 11, 13, 15, and 16 of copending Application No. 11/438,573 is acknowledged. However, the aforementioned nonstatutory obviousness-type double patenting rejections have been maintained.

The rejection of claims 29-53, 59 and 62 under 35 U.S.C. 103(a) as being unpatentable over Hacker et al. (US Patent 6,677,276 B1), Brigance (US 2002/0155953 A1) and Jimoh (US 2003/0004063 A1) **is maintained**.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claims 29-53, 59 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hacker et al. (US Patent 6,677,276 B1), Brigrance (US 2002/0155953 A1) and Jimoh (US 2003/0004063 A1).**

### ***Applicant's Invention***

Applicant claims an aqueous herbicidal composition useful for killing or controlling the growth of unwanted plants comprising: glyphosate or a salt or ester



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thereof (having a concentration in a range from about 4-16.2 grams acid equivalent./L); pyridine analog or a herbicidal derivative thereof selected from the group consisting of triclopyr, clopyralid, dithiopyr, thiazopyr, and picloram (having a concentration in a range from about .4-2 grams acid equivalent/L).; and, at least one surfactant (having a concentration not greater than 3.9 grams/L); wherein the glyphosate (acid equivalent basis) and the pyridine analog are present in a weight ratio range between 1:1-20:1, and further wherein when the glyphosate is predominantly in the form of a salt, said salt is selected from the group consisting of a sodium salt, an ammonium salt, an alkylammonium salt, a 10 C3-C16 alkanolammonium salt, a di-ammonium salt, an alkylamine salt, a C3-C~6 alkanolamine salt, an alkylsulfonium salt, a sulfoxonium salt, and combinations thereof.

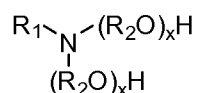
***Determination of the scope and the content of the prior art  
(MPEP 2141.01)***

Hacker et al. teach herbicide combinations (A)+(B), with an effective content of (A) herbicides from the group **(A2) glyphosate (salts)(preferably its alkali metal salts or salts with amines, in particular glyphosate isopropylammonium (see column 2, lines 20-33) and the sodium salt of glyphosate (column 5, line 15) and (B) herbicides from the group (B2) predominantly foliar-acting herbicides, such as quinmerac, clopyralid, pyridate and ethametsulfuron-methyl, which are active against dicotyledonous harmful plants (see abstract). Hacker et al. teach that synergistic effects are observed when the active ingredients (A) and (B)**

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are applied jointly (column 3, line 6-34). Hacker et al. teach that glyphosate is usually employed in the form of a salt, preferably in the form of a monoisopropylammonium salt or a trimethylsulfoxonium salt and that the application rates of the aforementioned herbicide combination is in the range of 20 to 2000, preferably 20 to 1000, in particular **20 to 800, g of A.S./ha** (column 5, lines 13-32). Hacker et al. teach that quantitative ratios of (A2):(B2) of particular interest is from 2000:1 to 1:250, preferably from 1000:1 to 1:150, in particular from 200:1 to 1:50, very particularly preferably from **60:1 to 1:20** (column 9, lines 6-8). Hacker et al. teach that the combinations of compounds (A) and (B) can be formulated in various ways which are wettable powders (WP), emulsifiable concentrates (EC), **aqueous solutions (SL)**, emulsions (EW) such as oil-in-water and water-in-oil emulsions, sprayable solutions or emulsions, oil- or water-based dispersions, suspoemulsions, dusts (DP), seed-dressing materials, granules for soil application or spreading, or water-dispersible granules (WG), ULV formulations, microcapsules or waxes (column 13, line 66 bridging to column 14, lines 1-9). Hacker et al. additionally teach the use of surfactants (column 14, lines 17 and 18) in the aforementioned herbicide combination.

Brigance teaches an adjuvant composition for pesticide formulations, particularly in N-hosphonomethylglycine (glyphosate) herbicidal formulations (abstract). Brigance teaches that the adjuvant composition comprises polyoxyalkylene aliphatic amine compounds of formula (I)



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## Formula I

wherein R1 is an alkyl or alkenyl group having from 6 to 22 carbon atoms, R2 is an alkylene group having from 2 to 4 carbon atoms, and x and y are numbers such that x+y has an average value of from about 2 to about 50 (claims 29, 33, 37-39, 42, 51, and section (i) of claim 53, a dialkoxylated amine of instant application). Brigance teaches that the adjuvant or surfactant typically used has a concentration from about 120 to about 180 grams/L ([0017]. Brigance teaches examples of pesticides with which the adjuvant can be formulated includes glyphosate and picloram ([0018],). Brigance teaches that the water soluble salts of glyphosate such as sodium and potassium are normally used for most applications due to glyphosate's limited water solubility when in acid form [0019]). Brigance teaches making the adjuvant composition into a concentrate and diluting the concentrate with water when ready for use to form an aqueous pesticidal composition ([0018], claim 62 of instant application). Brigance teaches the herbicidal composition comprising about 50 to about 500 grams acid equivalent /L , preferably between about 360 to about 500 grams acid equivalent/L ([0069]). Additionally, Brigance teaches the formulations being used for killing and/or controlling the growth of weeds ([0020]).

Jimoh teaches stable, liquid concentrate herbicidal compositions comprising a water-soluble herbicide in a continuous aqueous phase and an oil-soluble herbicide in a discontinuous oil phase (abstract). Jimoh teaches the use of water-soluble herbicides such as clopyralid, picloram, triclopyr, and the especially preferred use of glyphosate or its salts (i.e. ammonium, C1-6 alkylammonium, C1-C6 alkylsulfonium, sodium and

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potassium, [0030]). Jimoh teaches that the liquid concentrate herbicidal composition can optionally contain more than one water-soluble herbicide in solution in the aqueous phase ([0029]). Jimoh teaches the use of oil-soluble herbicides such as dithiopyr and thiazopyr ([0011] and [0012]). Jimoh teaches the oil-soluble herbicide being present in a concentration such that the weight ratio of water-soluble herbicide (glyphosate) to oil-soluble herbicide (dithiopyr and thiazopyr) ranges from about 190:1 to about 1:1 ([0038]). Additionally, Jimoh teaches the use of at least one surfactant ([0051-0055]) and a method wherein the liquid concentrate herbicidal composition is applied to weeds or unwanted plants such as kudzu ([0076]).

***Ascertainment of the difference between the prior art and the claims  
(MPEP 2141.02)***

The difference between the invention of the instant application and that of Hacker et al., Brigance, and Jimoh is that Hacker et al., Brigance, and Jimoh do not expressly teach a herbicidal composition wherein the concentration of the surfactant is not greater than 3.9 g/L.

***Finding of prima facie obviousness***

***Rationale and Motivation (MPEP 2142-2143)***

It would have been obvious to one of ordinary skill in the art at the time of the invention to arrive at an aqueous herbicidal composition comprising glyphosate or a

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derivative thereof, a pyridine analog or derivative thereof selected from the group consisting of triclopyr, clopyralid, dithiopyr, thiazopyr, and picloram, and at least one surfactant having a concentration not greater than 3.9 g/L. Glyphosate herbicidal combinations are well known to one of ordinary skill in the art as taught by Jimoh , Brigance, and Hacker et al. Although the aforementioned references do not teach the use of the surfactant concentrations as claimed in the instant application, absent a showing of unexpected results, it would be obvious to one of ordinary skill in the art to vary the concentration amounts depending on the desired result and plant species. Determining optimal concentrations of the herbicidal composition components is routine experimentation and is readily practiced by one of ordinary skill.

### ***Examiner's Response to Applicant's Remarks***

Applicant's arguments filed on June 10, 2009 have been fully considered but they are not persuasive.

In reference to Jimoh, Applicant argues that:

- (i) Jimoh provides no teaching, suggestion or motivation to one skilled in the art to select the specific combination of glyphosate and triclopyr from among the 1326 possible combinations of two water soluble herbicides;
- (ii) Jimoh provides no teaching, suggestion or motivation to one skilled in the art to select glyphosate from among the 9 preferred water soluble herbicides and select dithiopyr or thiazopyr from among the 191 preferred oil soluble herbicides to arrive at the combination of glyphosate and dithiopyr or glyphosate and thiazopyr from among the 1719 possible water soluble and oil soluble co-herbicide combinations;

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(iii) Jimoh discloses that dithiopyr or thiazopyr must be dissolved in an organic solvent to minimize chemical degradation, and therefore teaches away from the present claims that encompass the combination of dithiopyr or thiazopyr with glyphosate in an aqueous phase, and in the absence of an organic solvent;

(iv) Jimoh addresses a different problem (degradation of oil-soluble herbicides upon exposure to aqueous medium) than do the present claims (overcoming glyphosate-pyridine analog antagonism to achieve both early plant control symptomology and long term plant control);

(v) Jimoh does not recognize the ratio of glyphosate to coherbicide as a result effective variable and does not teach or suggest that glyphosate-pyridine analog herbicide antagonism can be overcome by formulating glyphosate in a weight percent excess; and

(vi) Jimoh does not suggest that herbicidal efficacy for some of the claimed combinations can be greater than what would be expected based on the herbicidal efficacy of the herbicides applied individually.

However, the Examiner disagrees with the arguments pertaining to Jimoh because Jimoh teaches the use of water-soluble herbicides such as **clopyralid, picloram, triclopyr**, and the **especially preferred use of glyphosate or its salts (i.e. ammonium, C1-6 alkylammonium, C1-C6 alkylsulfonium, sodium and potassium**, [0030]). Jimoh teaches that the liquid concentrate herbicidal composition can optionally contain **more than one water-soluble herbicide in solution in the aqueous phase** ([0029]). Jimoh teaches the use of oil-soluble herbicides such as dithiopyr and thiazopyr ([0011] and [0012]). Jimoh also teaches the oil-soluble herbicide being present in a concentration such that the **weight ratio of water-soluble herbicide (glyphosate) to oil-soluble herbicide (dithiopyr and thiazopyr) ranges from about 190:1 to about 1:1 ([0038])** and the use of at least one surfactant ([0051-0055]). The aforementioned composition taught by Jimoh comprises the same components as instantly claimed and

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would thus inherently overcome glyphosate- pyridine analog antagonism to achieve both early plant control symptomology and long term plant control. As stated in the Non-Final Office Action mailed November 10, 2008, Hacker et al. also teach the instantly claimed composition and that synergistic effects are observed when the active ingredients (A)**glyphosate** and (B) **clopyralid** are applied jointly (column 3, line 6-34). The composition of the prior art is the same as Applicant's composition. Thus, the skilled artisan would recognize that a composition is inseparable from its properties. Hence, all the properties associated with Applicant's compositions would also be possessed by the compositions of the prior art. With regard to the argument that Jimoh discloses that dithiopyr or thiazopyr must be dissolved in an organic solvent to minimize chemical degradation, and that the present claims encompass the combination of dithiopyr or thizaopyr with glyphosate in an aqueous phase, and in the absence of an organic solvent, the instant claims do not exclude an organic solvent component. According to MPEP 2111.03 [R-3], the transitional term "comprising", which is synonymous with "including," "containing," or "characterized by," is inclusive or open-ended and does not exclude additional, unrecited elements or method steps. Hence, the use of "comprising" language in the instant claims would allow for the inclusion of an organic solvent.

In reference to Hacker, Applicant argues that:

i) Hacker also fails to teach or suggest that glyphosate-pyridine analog herbicide antagonism can be overcome by formulating glyphosate in a weight percent excess. Hacker does not recognize the ratio of glyphosate to coherbicide as a result effective variable for overcoming antagonism and variation and/or optimization thereof would

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therefore not be obvious. In particular, Hacker does not recognize co-herbicide ratio as a variable that affects antagonism and does not attach any importance to the instantly claimed weight ratio range of glyphosate to coherbicide in the broadly disclosed range of from 2000:1 to 1:250. Hacker therefore teaches that an excess of pyridine analog herbicide to glyphosate from 1:1 to as much as 250:1 (a range that is excluded from the scope of the pending claims) is suitable for the practice of the invention and teaches away from the present invention in that regard. Thus, Hacker does not teach, suggest or attach any importance to the selection of glyphosate and pyridine analog herbicide wherein glyphosate is in excess on a weight percent a.e. basis, as is instantly claimed.

(ii) Hacker does not teach or suggest that both short- and long-term plant control can be achieved with the instantly claimed herbicide combinations;

(iii) Haeker provides no glyphosate working examples and therefore does not attach any importance to glyphosate compositions that would have motivated one skilled in the art to select the claimed composition from among the over 40 combinations while rejecting the remaining combinations disclosed therein;

(iv) Hacker addresses a different problem (control of harmful plants in crops of herbicide tolerant oil-seed rape) than do the present claims (overcoming glyphosate- pyridine analog herbicide antagonism in order to achieve both early plant control symptomology and long term plant control); and

(v) Hacker does not suggest that herbicidal efficacy for some of the claimed combinations can be greater than what would be expected based on the herbicidal efficacy of the herbicides applied individually.

However, the Examiner disagrees with the arguments pertaining to Hacker because Hacker et al. teach herbicide combinations (A)+(B), with an effective content of (A) herbicides from the group **(A2) glyphosate (salts)(preferably its alkali metal salts or salts with amines, in particular glyphosate isopropylammonium (see column 2, lines 20-33) and the sodium salt of glyphosate (column 5, line 15) and (B) herbicides from the group (B2) predominantly foliar-acting herbicides, such as quinmerac, clopyralid, pyridate and ethametsulfuron-methyl, which are active against**



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dicotyledonous harmful plants (see abstract). Hacker et al. teach that synergistic effects are observed when the active ingredients (A) and (B) are applied jointly (column 3, line 6-34). Hacker et al. teach that the aforementioned herbicide combination is in the range of 20 to 2000, preferably 20 to 1000, in particular **20 to 800, g of A.S./ha** (column 5, lines 13-32) and that quantitative ratios of (A2):(B2) of particular interest is from 2000:1 to 1:250, preferably from 1000:1 to 1:150, in particular from 200:1 to 1:50, very particularly preferably from **60:1 to 1:20** (column 9, lines 6-8). In addition, Hacker et al. teach the use of surfactants (column 14, lines 17 and 18). The aforementioned composition taught by Hacker et al. comprises the same components as instantly claimed and would thus inherently overcome glyphosate- pyridine analog antagonism to achieve both early plant control symptomology and long term plant control. The composition of the prior art is the same as Applicant's composition. Thus, the skilled artisan would recognize that a composition is inseparable from its properties. Hence, all the properties associated with Applicant's compositions would also be possessed by the compositions of Hacker et al. Applicant argues that Hacker does not attach any importance to the instantly claimed weight ratio range of glyphosate to coherbicide in the broadly disclosed range of from 2000:1 to 1:250 and the concludes that Hacker et al. teaches away from the present invention because Hacker et al. teaches that an excess of pyridine analog herbicide to glyphosate from 1:1 to as much as 250:1 is suitable for the practice of the invention, the Examiner disagrees with this argument. Hacker et al. teach that quantitative ratios of (A2):(B2) is from 2000:1 to 1:250, preferably from 1000:1 to 1:150, in particular from 200:1 to 1:50, **very**

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**particularly preferably from 60:1 to 1:20** (column 9, lines 6-8). In reference to the claimed ratios of the herbicidal actives, the adjustment of particular conventional working conditions is deemed merely a matter of judicious selection and routine optimization which is well within the purview of the skilled artisan. Accordingly, one skilled in the art at the time the invention was made would have been motivated to make this type of modification as being well within the purview of the skilled artisan and no more than an effort to optimize results. Therefore, the claimed invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made because every element of the invention has been fairly suggested by Hacker et al.

In reference to Brigance, Applicant argues that:

- (i) Brigance provides no teaching, suggestion or motivation to one skilled in the art to select the specific combination of glyphosate and picloram from the 136 possible co-herbicide combinations;
- (ii) The instantly claimed combinations are not among Brigance's preferred embodiments;
- (iii) The claim element directed to the weight ratio of glyphosate to pyridine analog is missing from Brigance. Brigance therefore does not teach, suggest or attach any importance to weight ratios between co-herbicides, much less the selection of glyphosate and picloram wherein glyphosate is in excess on a weight percent a.e. basis;
- (iv) Brigance addresses a different problem (eye irritancy) than do the present claims (overcoming glyphosate-pyridine analog antagonism to achieve both early plant control symptomology and long term plant control);

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(v) Brigance does not teach or suggest that glyphosate-pyridine analog herbicide antagonism can be overcome by formulating glyphosate in a weight percent excess; and

(vi) Brigance does not suggest that herbicidal efficacy for some of the claimed combinations can be greater than what would be expected based on the herbicidal efficacy of the herbicides applied individually.

With regard to Brigance, the Examiner agrees with Applicants argument that Brigance does not teach the instantly claimed weight ratios. However, Brigance teaches a herbicidal combination comprising the instant active components as well as the instantly claimed surfactant. Brigance teaches examples of pesticide compositions including glyphosate and picloram with which the adjuvant can be formulated ([0018]). Brigance teaches that the water soluble salts of glyphosate such as sodium and potassium are normally used for most applications due to glyphosate's limited water solubility when in acid form [0019]). Brigance additionally teaches the herbicidal composition comprising about 50 to about 500 grams acid equivalent /L , preferably between about 360 to about 500 grams acid equivalent/L ([0069]). With regard to the argument that the instantly claimed combinations are not among Brigance's preferred embodiments, when considering a prior art rejection, the whole disclosure is considered by the Office and is as important as the preferred embodiments. The aforementioned composition taught by Jimoh comprises the same components as instantly claimed and would thus inherently overcome glyphosate- pyridine analog antagonism to achieve both early plant control symptomology and long term plant control. As stated in the Non-Final Office Action mailed November 10, 2008, Hacker et al. also teach the

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instantly claimed composition and that synergistic effects are observed when the active ingredients (A)**glyphosate** and (B) **clopyralid** are applied jointly (column 3, line 6-34). The composition of the prior art is the same as Applicant's composition. Thus, the skilled artisan would recognize that a composition is inseparable from its properties. Hence, all the properties associated with Applicant's compositions would also be possessed by the compositions of the prior art.

Applicant argues that the cited prior art references, individually or in combination, do not suggest the claimed combination because of hindsight reconstruction. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Lastly, Applicant argues that the cited prior art references, individually or in combination, do not suggest the claimed combination because that the Office has failed to establish a prima facie case of obviousness thereby rendering moot the requirement for a showing of unexpected results. The Examiner disagrees with the aforementioned argument because Jimoh and Hacker et al also teach the claimed co-herbicide combination and the claimed weight ratio of at least 7.6:1. Jimoh teaches the oil-soluble

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herbicide being present in a concentration such that the weight ratio of water-soluble herbicide (glyphosate) to oil-soluble herbicide (dithiopyr and thiazopyr) ranges from about 190:1 to about 1:1 ([0038]). In addition, Hacker et al. teach that synergistic effects are observed when the active ingredients (A) (glyphosate) and (B)(clopyralid) are applied jointly (column 3, line 6-34). Hacker et al. teach that quantitative ratios of glyphosate to clopyralid of particular interest is from 2000:1 to 1:250, preferably from 1000:1 to 1:150, in particular from 200:1 to 1:50, very particularly preferably from 60:1 to 1:20 (column 9, lines 6-8). Therefore, the enhanced efficacy at 5 DAT for the claimed composition is not unexpected.

All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

Therefore, the claimed invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made because every element of the invention has been fairly suggested by the cited reference.

### ***Conclusion***

The claims remain rejected.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR Only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Courtney Brown, whose telephone number is 571-270-3284. The examiner can normally be reached on Monday-Friday from 8 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

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Supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Ernst V Arnold/  
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